Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

# General

## Title

Stroke: percent of ischemic and hemorrhagic stroke patients who received VTE prophylaxis or who have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.

## Source(s)

Specifications manual for national hospital inpatient quality measures, version 5.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; Effective 2015 Oct 1. various p.

# Measure Domain

## Primary Measure Domain

Clinical Quality Measures: Process

## Secondary Measure Domain

Does not apply to this measure

# Brief Abstract

## Description

This measure is used to assess the percent of patients 18 years of age and older with an ischemic stroke or a hemorrhagic stroke who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.

## Rationale

Stroke patients are at increased risk of developing venous thromboembolism (VTE). One study noted proximal deep vein thrombosis in more than a third of patients with moderately severe stroke. Reported rates of occurrence vary depending on the type of screening used. Prevention of VTE, through the use of prophylactic therapies, in at risk patients is a noted recommendation in numerous clinical practice guidelines. For acutely ill stroke patients who are confined to bed, thromboprophylaxis with low-molecular-weight heparin (LMWH), low-dose unfractionated heparin (LDUH), or fondaparinux is recommended if there are no contraindications. Aspirin alone is not recommended as an agent to prevent

VTE.

## Evidence for Rationale

Specifications manual for national hospital inpatient quality measures, version 5.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; Effective 2015 Oct 1. various p.

## Primary Health Components

Stroke; venous thromboembolism (VTE) prophylaxis

## Denominator Description

Ischemic or hemorrhagic stroke patients (see the related "Denominator inclusions/Exclusions" field)

## Numerator Description

Ischemic or hemorrhagic stroke patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission

# Evidence Supporting the Measure

## Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## Additional Information Supporting Need for the Measure

- Stroke ranks as the number five cause of death in the United States, following diseases of the heart, cancer, and chronic lung-related diseases. Each year, approximately 795,000 people experience a new or recurrent stroke. Approximately 610,000 of these are first attacks, and 185,000 are recurrent strokes. These numbers equate to one stroke victim every 40 seconds on average. According to 2010 mortality data, one of every 20 deaths in the United States is attributable to stroke. Women have a higher lifetime risk of stroke than men. Lifetime risk of stroke among those 55 to 75 years of age was 1 in 5 for women (20% to 21%) and approximately 1 in 6 for men (14% to 17%). Blacks have a risk of first-ever stoke that is almost twice that of whites (American Heart Association [AHA], 2015).
- Stroke is also a leading cause of long-term disability (Centers for Disease Control and Prevention [CDC], 2009). Data from the National Heart, Lung and Blood Institute (NHLBI) revealed that 50% of ischemic stroke survivors age greater than 65 years had some hemiparesis; 35% experienced depressive symptoms; 30% were unable to ambulate without assistance; 26% were dependent in activities of daily living; 19% had aphasia; and 26% were institutionalized in a nursing home. The mean lifetime cost of ischemic stroke, including inpatient care, rehabilitation, and follow-up as

necessary for residual deficits is estimated at $140,048 per person (AHA, 2015).

- Pulmonary embolism (PE) accounts for approximately 10% of deaths after stroke, and the complication may be detected in approximately 1% of patients who have had a stroke, underscoring the importance of prevention as the most critical action step for reducing death from PE (Wijdicks & Scott, 1997). Besides being associated with life-threatening PE, symptomatic DVT also slows recovery and rehabilitation after stroke. The risk of VTE is highest among immobilized and older patients with severe stroke (Adams et al., 2007).

## Evidence for Additional Information Supporting Need for the Measure


Adams HP, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks E. Guidelines for the early management of adults with ischemic stroke: a guideline from the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention [trunc]. Stroke. 2007;38:1689-90.

American Heart Association (AHA). Heart disease and stroke statistics - 2015 update. Dallas (TX): American Heart Association (AHA); 2015. 22 p.

Centers for Disease Control and Prevention (CDC). Prevalence and most common causes of disability among adults--United States, 2005. MMWR Morb Mortal Wkly Rep. 2009 May 1;58(16):421-6. PubMed

Wijdicks EF, Scott JP. Pulmonary embolism associated with acute stroke. Mayo Clin Proc. 1997 Apr;72(4):297-300. PubMed


## Extent of Measure Testing

Unspecified

# State of Use of the Measure

## State of Use

Current routine use

## Current Use

not defined yet

# Application of the Measure in its Current Use

## Measurement Setting

Hospital Inpatient

## Professionals Involved in Delivery of Health Services

not defined yet

### Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

### Statement of Acceptable Minimum Sample Size

Specified

### Target Population Age

Age greater than or equal to 18 years

### Target Population Gender

Either male or female

## National Strategy for Quality Improvement in Health Care

### National Quality Strategy Aim

Better Care

### National Quality Strategy Priority

Making Care Safer
Prevention and Treatment of Leading Causes of Mortality

## Institute of Medicine (IOM) National Health Care Quality Report Categories

### IOM Care Need

Getting Better

### IOM Domain

Effectiveness

Safety

## Data Collection for the Measure

### Case Finding Period

Discharges October 1 through June 30

## Denominator Sampling Frame

Patients associated with provider

## Denominator (Index) Event or Characteristic

Clinical Condition

Institutionalization

Patient/Individual (Consumer) Characteristic

## Denominator Time Window

not defined yet

## Denominator Inclusions/Exclusions

Inclusions
Discharges with an *International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Principal Diagnosis Code* for ischemic or hemorrhagic stroke (as defined in the appendices of the original measure documentation)

Exclusions

- Patients less than 18 years of age
- Patients who have a Length of Stay (LOS) less than 2 days
- Patients who have a LOS greater than 120 days
- Patients with *Comfort Measures Only* (as defined in the Data Dictionary) documented on day of or day after hospital arrival
- Patients enrolled in a clinical trials
- Patients admitted for *Elective Carotid Intervention* (as defined in the Data Dictionary)

## Exclusions/Exceptions

not defined yet

## Numerator Inclusions/Exclusions

Inclusions
Ischemic or hemorrhagic stroke patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission

Exclusions
None

## Numerator Search Strategy

Institutionalization

### Data Source

Administrative clinical data

Electronic health/medical record

Paper medical record

### Type of Health State

Does not apply to this measure

### Instruments Used and/or Associated with the Measure

- STK Initial Patient Population Algorithm Flowchart
- STK-1: Venous Thromboembolism Prophylaxis Flowchart

## Computation of the Measure

### Measure Specifies Disaggregation

Does not apply to this measure

### Scoring

Rate/Proportion

### Interpretation of Score

Desired value is a higher score

### Allowance for Patient or Population Factors

not defined yet

### Standard of Comparison

not defined yet

## Identifying Information

### Original Title

STK-1: venous thromboembolism (VTE) prophylaxis.

### Measure Collection Name

National Hospital Inpatient Quality Measures

## Measure Set Name

Stroke

## Submitter

The Joint Commission - Health Care Accreditation Organization

## Developer

The Joint Commission - Health Care Accreditation Organization

## Funding Source(s)

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

## Composition of the Group that Developed the Measure

The composition of the group that developed the measure is available at: http://www.jointcommission.org/assets/1/6/Roster_STK_Maintenance_TAP_web_posting_Jul2012.pdf .

## Financial Disclosures/Other Potential Conflicts of Interest

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Joint Commission's Conflict of Interest policies, copies of which are available upon written request to The Joint Commission.

## Endorser

National Quality Forum - None

## NQF Number

not defined yet

## Date of Endorsement

2014 Dec 23

## Measure Initiative(s)

Quality CheckÂ®

## Adaptation

This measure was not adapted from another source.

## Date of Most Current Version in NQMC

2015 Oct

## Measure Maintenance

This measure is reviewed and updated every 6 months.

## Date of Next Anticipated Revision

Unspecified

## Measure Status

This is the current release of the measure.

This measure updates a previous version: Specifications manual for national hospital inpatient quality measures, version 4.3b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2014 Apr. various p.

## Measure Availability

Source available from The Joint Commission Web site . Information is also available from the QualityNet Web site . Check The Joint Commission Web site and QualityNet Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

## NQMC Status

The Joint Commission originally submitted this NQMC measure summary to ECRI Institute on April 30, 2009. This NQMC summary was reviewed accordingly by ECRI Institute on September 9, 2009. The information was verified by the measure developer on November 9, 2009.

The Joint Commission informed NQMC that this measure was updated on April 28, 2010 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on September 3, 2010.

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This NQMC summary was edited by ECRI Institute on November 16, 2015.

## Copyright Statement



# Production

## Source(s)

Specifications manual for national hospital inpatient quality measures, version 5.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; Effective 2015 Oct 1. various p.

# Disclaimer

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